

**COPY**

C/007/035 Incoming

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## Sunnyside Cogeneration Associates

P.O. Box 10, East Carbon, Utah 84520 • (435) 888-4476 • Fax (435) 888-2538

April 28, 2010

Daron Haddock  
Utah Division of Oil, Gas & Mining  
1594 W. North Temple, Suite 1210  
Salt Lake City, Utah 84116

RE: First Quarter 2010 Inspection Report  
Sunnyside Refuse Pile C/007/035

Dear Daron:

Please find enclosed a copy of the First Quarter 2010 Inspection Report for Sunnyside Cogeneration Associates' impoundments, refuse pile and excess spoil areas.

Should you have any questions, please contact Rusty Netz or myself at (435)888-4476.

Thank You,

*Richard Carter/RN*

Richard Carter  
Agent For  
Sunnyside Cogeneration Associates

c.c. Steve Gross  
William Rossiter  
Paul Shepard  
Maggie Estrada  
Rusty Netz  
Plant File

File in:

- ☐ Confidential
- ☐ Shelf
- ☒ Expandable

Date Folder 05032010 C/ 0070035

See Incoming For additional information

RECEIVED

MAY 03 2010

DIV. OF OIL, GAS & MINING

# IMPOUNDMENT INSPECTION AND CERTIFIED REPORT

## GENERAL INFORMATION

## Railcut Sediment Pond

Report Date April 21, 2010  
Permit Number C/007/035  
Mine Name Sunnyside Refuse and Slurry  
Company Name Sunnyside Cogeneration Associates

## IMPOUNDMENT IDENTIFICATION

Impoundment Name RailCut Sediment Pond  
Impoundment Number 007  
UPDES Permit Number UT024759  
MSHA ID Number N/A

## IMPOUNDMENT INSPECTION

Inspection Date March 26, 2010  
Inspected by Rusty Netz  
Reason for Inspection First Quarter Inspection 2010

### 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

#### a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 4.8 Acre-feet  
Pond bottom elevation = 6206.0  
100% Sediment Storage Volume = 0.34 acre-feet at Elevation 6209  
60% sediment Storage Volume = 0.2 acre feet at Elevation = 6207.7  
Existing Sediment Elevation = 6207.2 +/-

#### b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6209.07  
Emergency Spillway Elevation = 6212.34

## 2. Field Information

*Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/ instrumentation information, inlet/ outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/ repairs, monitoring information, vegetation on outslopes of embankments, etc.*

Pond had some water in it. No samples were taken Pond did not require decanting  
Sediment levels were good  
Embankment conditions were good. Vegetation on outslopes was adequate.  
Inlet / Outlet conditions were good. No structural or hazardous conditions were observed.

# IMPOUNDMENT INSPECTION AND CERTIFIED REPORT

## Rail Cut Sediment Pond

### 3. Field Evaluation.

*Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period*

No recent changes in the geometry of the structure have been observed

Some water was impounded

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### QUALIFICATION STATEMENT:

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature: \_\_\_\_\_

*Rusty Nety*

Date: \_\_\_\_\_

*4/25/10*

### CERTIFIED REPORT

#### IMPOUNDMENT EVALUATION

*If you answer NO to these questions, please explain under comments*

- |  |            |
|--|------------|
| 1. Is impoundment designed and constructed in accordance with the approved plan?   | <u>YES</u> |
| 2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?                                 | <u>YES</u> |
| 3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection? | <u>YES</u> |

### COMMENTS/ OTHER INFORMATION

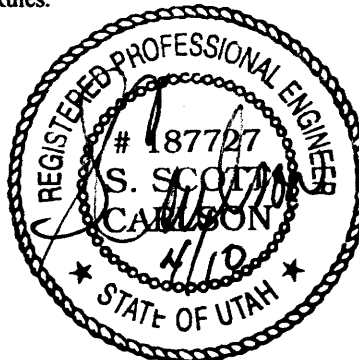
None

### CERTIFICATION STATEMENT:

I hereby certify that: I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved designs and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules.

By: S. Scott Carlson, PE, Twin Peaks, P.C.  
P.E. Number & State: 187727 UTAH

Affix Signature, Stamp and Date



# IMPOUNDMENT INSPECTION AND CERTIFIED REPORT

## Old Coarse Refuse Road Sediment Pond

### GENERAL INFORMATION

Report Date April 21, 2010  
Permit Number C/007/035  
Mine Name Sunnyside Refuse and Slurry  
Company Name Sunnyside Cogeneration Associates

### IMPOUNDMENT IDENTIFICATION

Impoundment Name Old Coarse Refuse Road Sediment Pond  
Impoundment Number 008  
UPDES Permit Number UT024759  
MSHA ID Number N/A

### IMPOUNDMENT INSPECTION

Inspection Date March 26, 2010  
Inspected by Rusty Netz  
Reason for Inspection First Quarter Inspection 2010

#### 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

#### a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 0.9 Acre-feet  
Pond bottom elevation = 6394.0  
100% Sediment Storage Volume = 0.08 acre-feet at Elevation 6395.1  
60% sediment Storage Volume = 0.05 acre feet at Elevation = 6394.75  
Existing Sediment Elevation = 6394.4 +/-

#### b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6395.75  
Emergency Spillway Elevation = 6399.4

### 2. Field Information

*Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/ instrumentation information, inlet/ outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/ repairs, monitoring information, vegetation on out slopes of embankments, etc.*

Pond had some water in it. No samples were taken Pond did not require decanting.  
Sediment level was good.  
Embankment conditions were good. Vegetation on out slopes was adequate.  
Inlet / Outlet conditions were good. No structural or hazardous conditions were observed.

# IMPOUNDMENT INSPECTION AND CERTIFIED REPORT

## Old Coarse Refuse Road Sediment Pond

### 3. Field Evaluation.

*Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period*

No recent changes in the geometry of the structure have been observed

Some water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### QUALIFICATION STATEMENT:

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Signature: \_\_\_\_\_

*Rusty noty*

Date: \_\_\_\_\_

*4/25/10*

### CERTIFIED REPORT

#### IMPOUNDMENT EVALUATION

*If you answer NO to these questions, please explain under comments*

1. Is impoundment designed and constructed in accordance with the approved plan?
2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?
3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?

YES

YES

YES

### COMMENTS/ OTHER INFORMATION

None

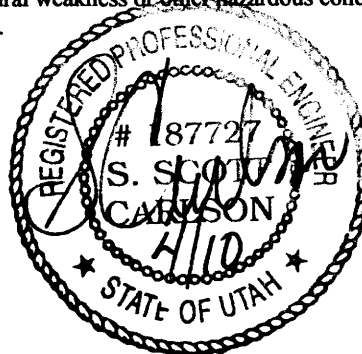
### CERTIFICATION STATEMENT:

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By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

Affix Signature, Stamp and Date



# IMPOUNDMENT INSPECTION AND CERTIFIED REPORT

## Pasture Sediment Pond

### GENERAL INFORMATION

Report Date April 21, 2010  
Permit Number C/007/035  
Mine Name Sunnyside Refuse and Slurry  
Company Name Sunnyside Cogeneration Associates

### IMPOUNDMENT IDENTIFICATION

Impoundment Name Pasture Sediment Pond  
Impoundment Number 009  
UPDES Permit Number UT024759  
MSHA ID Number N/A

### IMPOUNDMENT INSPECTION

Inspection Date March 26, 2010  
Inspected by Rusty Netz  
Reason for Inspection First Quarter Inspection 2010

#### 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

#### a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 3.2 Acre-feet  
Pond bottom elevation = 6484.5  
100% Sediment Storage Volume = 0.42 acre-feet at Elevation 6486.2  
60% sediment Storage Volume = 0.25 acre feet at Elevation = 6485.5  
Existing Sediment Elevation = 6485.1 +/-

#### b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6486.6  
Emergency Spillway Elevation = 6490.6

### 2. Field Information

*Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/ instrumentation information, inlet/ outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/ repairs, monitoring information, vegetation on out slopes of embankments, etc.*

Pond had some water in it. No samples were taken Pond did not require decanting.  
Sediment level was good  
Embankment conditions were good. Vegetation on out slopes was adequate.  
Inlet / Outlet conditions were good. No structural or hazardous conditions were observed.

# IMPOUNDMENT INSPECTION AND CERTIFIED REPORT

## Pasture Sediment Pond

### 3. Field Evaluation.

*Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period*

No recent changes in the geometry of the structure were observed.

A small amount of water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### QUALIFICATION STATEMENT:

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Signature: \_\_\_\_\_

*Rusty noty*

Date: \_\_\_\_\_

*4/25/10*

### CERTIFIED REPORT

#### IMPOUNDMENT EVALUATION

*If you answer NO to these questions, please explain under comments*

1. Is impoundment designed and constructed in accordance with the approved plan? YES
2. Is impoundment free of instability, structural weakness, or any other hazardous conditions? YES
3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection? YES

### COMMENTS/ OTHER INFORMATION

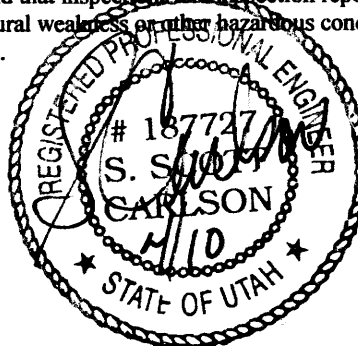
None

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By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH



Affix Signature, Stamp and Date

# IMPOUNDMENT INSPECTION AND CERTIFIED REPORT

## Coarse Refuse Toe Sediment Pond

### GENERAL INFORMATION

Report Date April 21, 2010  
Permit Number C/007/035  
Mine Name Sunnyside Refuse and Slurry  
Company Name Sunnyside Cogeneration Associates

### IMPOUNDMENT IDENTIFICATION

Impoundment Name New Coarse Refuse Toe Sediment Pond  
Impoundment Number 012  
UPDES Permit Number UT024759  
MSHA ID Number N/A

### IMPOUNDMENT INSPECTION

Inspection Date March 26, 2010  
Inspected by Rusty Netz  
Reason for Inspection First Quarter Inspection 2010

#### 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

#### a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 1.6 Acre-feet  
Pond bottom elevation = 6176.0  
100% Sediment Storage Volume = 0.07 acre-feet at Elevation 6177.8  
60% sediment Storage Volume = 0.03 acre feet at Elevation = 6177.0  
Existing Sediment Elevation = 6176.6 +/-

#### b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6178.2  
Emergency Spillway Elevation = 6183.63

### 2. Field Information

*Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/ instrumentation information, inlet/ outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/ repairs, monitoring information, vegetation on outslopes of embankments, etc.*

Pond had some water in it. No samples were taken Pond did not require decanting  
Sediment level was good  
Embankment conditions were good. Vegetation on outslopes was adequate.  
Inlet / Outlet conditions were good. No structural or hazardous conditions were observed.



# IMPOUNDMENT INSPECTION AND CERTIFIED REPORT

## Coarse Refuse Toe Sediment Pond

### 3. Field Evaluation.

*Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period*

No recent changes in the geometry of the structure have been observed

Some water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### QUALIFICATION STATEMENT:

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Signature: \_\_\_\_\_

*Rusty Nety*

Date: \_\_\_\_\_

*4/25/10*

### CERTIFIED REPORT

#### IMPOUNDMENT EVALUATION

*If you answer NO to these questions, please explain under comments*

- |  |            |
|--|------------|
| 1. Is impoundment designed and constructed in accordance with the approved plan?   | <u>YES</u> |
| 2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?                                 | <u>YES</u> |
| 3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection? | <u>YES</u> |

### COMMENTS/ OTHER INFORMATION

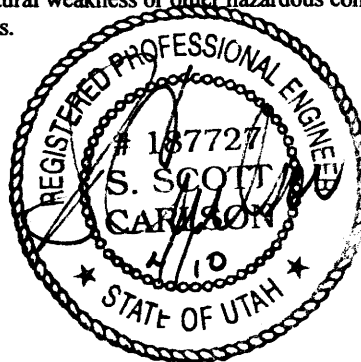
None

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By: S. Scott Carlson, PE, Twin Peaks, P.C.  
P.E. Number & State: 187727 UTAH

Affix Signature, Stamp and Date



# IMPOUNDMENT INSPECTION AND CERTIFIED REPORT

## GENERAL INFORMATION

## Coal Pile Sediment Pond

Report Date April 21, 2010  
Permit Number C/007/035  
Mine Name Sunnyside Refuse and Slurry  
Company Name Sunnyside Cogeneration Associates

## IMPOUNDMENT IDENTIFICATION

Impoundment Name Coal Pile Sediment Pond  
Impoundment Number 014  
UPDES Permit Number UT024759  
MSHA ID Number N/A

## IMPOUNDMENT INSPECTION

Inspection Date March 26, 2010  
Inspected by Rusty Netz  
Reason for Inspection First Quarter Inspection 2010

### 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

#### a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 1.5 Acre-feet  
Pond bottom elevation = 6473.0  
100% Sediment Storage Volume = 0.5 acre-feet at Elevation 6476.0  
60% sediment Storage Volume = 0.3 acre feet at Elevation = 6474.7  
Existing Sediment Elevation = 6474 +/-

#### b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6476.0  
Secondary Dewatering Orifice = 6477.2  
Primary Spillway Elevation = 6477.9  
Emergency Spillway Elevation = 6479.0

## 2. Field Information

*Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/ instrumentation information, inlet/ outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/ repairs, monitoring information, vegetation on out slopes of embankments, etc.*

Pond had some water in it. No samples were taken Pond did not require decanting.  
Sediment level was good.  
Embankment conditions were good. Vegetation on out slopes was adequate.  
Inlet / Outlet conditions were good. No structural or hazardous conditions were observed.

# IMPOUNDMENT INSPECTION AND CERTIFIED REPORT

## Coal Pile Sediment Pond

### 3. Field Evaluation.

*Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period*

No recent changes in the geometry of the structure have been observed

A small amount of water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### QUALIFICATION STATEMENT:

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Signature: \_\_\_\_\_

*Rusty Rutz*

Date: \_\_\_\_\_

*4/25/10*

### CERTIFIED REPORT

#### IMPOUNDMENT EVALUATION

*If you answer NO to these questions, please explain under comments*

1. Is impoundment designed and constructed in accordance with the approved plan?
2. Is impoundment free of instability, structural weakness, or any other hazardous conditions?
3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?

YES

YES

YES

### COMMENTS/ OTHER INFORMATION

None

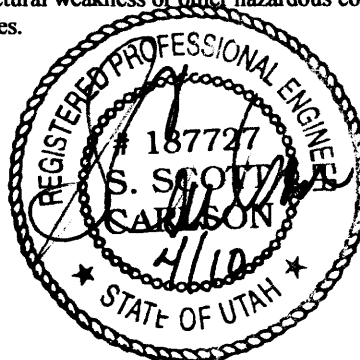
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By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

Affix Signature, Stamp and Date



# IMPOUNDMENT INSPECTION AND CERTIFIED REPORT

## Borrow Area Sediment Pond

### GENERAL INFORMATION

Report Date April 21, 2010  
Permit Number C/007/035  
Mine Name Sunnyside Refuse and Slurry  
Company Name Sunnyside Cogeneration Associates

### IMPOUNDMENT IDENTIFICATION

Impoundment Name Borrow Area Sediment Pond  
Impoundment Number 016  
UPDES Permit Number UT024759  
MSHA ID Number N/A

### IMPOUNDMENT INSPECTION

Inspection Date March 26, 2010  
Inspected by Rusty Netz  
Reason for Inspection First Quarter Inspection 2010

#### 1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

None

#### a. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and estimated average elevation of existing sediment.

Total Pond Volume = 8.3 Acre-feet  
Pond bottom elevation = 6510.0  
100% Sediment Storage Volume = 2.3 acre-feet at Elevation 6514.3  
60% sediment Storage Volume = 1.4 acre feet at Elevation = 6513.3  
Existing Sediment Elevation = 6511 +/-

#### b. Principle and emergency spillway elevations.

Primary Dewatering Pipe = 6514.3  
Emergency Spillway Elevation = 6517.03

### 2. Field Information

*Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/ instrumentation information, inlet/ outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/ repairs, monitoring information, vegetation on out slopes of embankments, etc.*

Pond had no water in it. No samples were taken  
Sediment level was good. Pond did not require decanting.  
Embankment conditions were good. Vegetation on out slopes was adequate.  
Inlet / Outlet conditions were good. No structural or hazardous conditions were observed.

# IMPOUNDMENT INSPECTION AND CERTIFIED REPORT

## Borrow Area Sediment Pond

### 3. Field Evaluation.

*Describe any changes in the geometry of the impounding structure, average and maximum depths and elevation of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period*

No recent changes in the geometry of the structure have been observed

No water was impounded

Sediment level was good.

No other aspects of the impounding structure were observed that could affect its stability or functionality.

### QUALIFICATION STATEMENT:

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Signature: \_\_\_\_\_

*Rusty Rutz*

Date: \_\_\_\_\_

*4/25/10*

### CERTIFIED REPORT

#### IMPOUNDMENT EVALUATION

*If you answer NO to these questions, please explain under comments*

1. Is impoundment designed and constructed in accordance with the approved plan? YES
2. Is impoundment free of instability, structural weakness, or any other hazardous conditions? YES
3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection? YES

### COMMENTS/ OTHER INFORMATION

None

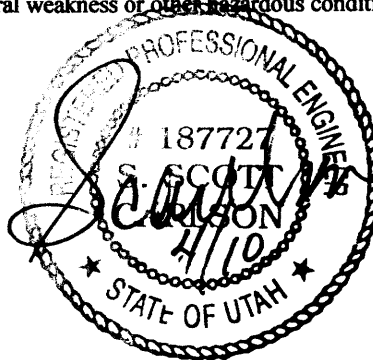
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By: S. Scott Carlson, PE, Twin Peaks, P.C.

P.E. Number & State: 187727 UTAH

Affix Signature, Stamp and Date



# INSPECTION AND CERTIFIED REPORT ON EXCESS SPOIL PILE OR REFUSE PILE

## GENERAL INFORMATION

Coarse Refuse Pile

Report Date April 21, 2010  
Permit Number C/007/035  
Mine Name Sunnyside Refuse and Slurry  
Company Name Sunnyside Cogeneration Associates

## EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION

Pile Name Coarse Refuse Pile  
Pile Number N/A  
MSHA ID Number 1211-UT-09-02093-01

Inspection Date March 26, 2010  
Inspected by Rusty Netz  
Reason for Inspection First Quarter Inspection 2010

Attachment to Report? (such as refuse sample analysis or photos) **YES**

## Field Evaluation

1. Foundation preparation, including the removal of all organic material and topsoil.

N/A

2. Placement of underdrains and protective filter systems.

N/A

3. Installation of final surface drainage systems

N/A

4. Placement and compaction of fill materials

N/A - Activities occurring at this time are associated with removal of refuse material

5. Final grading and revegetation of fill.

N/A

6. Appearances of instability, structural weakness, and other hazardous conditions

No aspects of the Fill structure were observed that could affect its stability or functionality

# INSPECTION AND CERTIFIED REPORT ON EXCESS SPOIL PILE OR REFUSE PILE

## Coarse Refuse Pile

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

Refuse material is actively being excavated and removed from various locations across the top of the pile

### QUALIFICATION STATEMENT:

I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

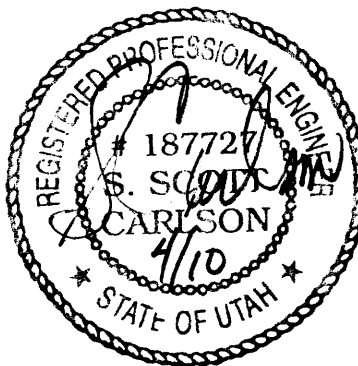
Signature: Rusty Rutz Date: 4/25/10

### CERTIFICATION STATEMENT

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

By: S. Scott Carlson, PE, Twin Peaks, P.C.  
P.E. Number & State: 187727 UTAH

Affix Signature, Stamp and Date



<b>INSPECTION AND CERTIFIED REPORT ON EXCESS SPOIL PILE OR REFUSE PILE</b>
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**GENERAL INFORMATION****Excess Spoil Disposal Area #1**

Report Date April 21, 2010  
Permit Number C/007/035  
Mine Name Sunnyside Refuse and Slurry  
Company Name Sunnyside Cogeneration Associates

**EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION**

Pile Name Excess Spoil Disposal Area #1  
Pile Number N/A  
MSHA ID Number 1211-UT-09-02093-04

Inspection Date March 26, 2010  
Inspected by Rusty Netz  
Reason for Inspection First Quarter Inspection 2010

Attachment to Report? (such as refuse sample analysis or photos) **YES**

**Field Evaluation**

1. Foundation preparation, including the removal of all organic material and topsoil.

N/A

2. Placement of underdrains and protective filter systems.

N/A

3. Installation of final surface drainage systems

N/A

4. Placement and compaction of fill materials

Approximately 24,640 tons of material were placed during the quarter.

5. Final grading and revegetation of fill.

N/A

6. Appearances of instability, structural weakness, and other hazardous conditions

No aspects of the Fill structure were observed that could affect its stability or functionality



# INSPECTION AND CERTIFIED REPORT ON EXCESS SPOIL PILE OR REFUSE PILE

Excess Spoil Disposal Area #1

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

Construction of the fill has been proceeding in shallow lifts in general conformance with the approved plan.

## QUALIFICATION STATEMENT:

I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

Signature: Rusty nety Date: 4/25/10

## CERTIFICATION STATEMENT

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

By: S. Scott Carlson, PE, Twin Peaks, P.C.  
P.E. Number & State: 187727 UTAH

Affix Signature, Stamp and Date



# INSPECTION AND CERTIFIED REPORT ON EXCESS SPOIL PILE OR REFUSE PILE

## GENERAL INFORMATION

**Excess Spoil Disposal Area #2**

Report Date April 21, 2010  
Permit Number C/007/035  
Mine Name Sunnyside Refuse and Slurry  
Company Name Sunnyside Cogeneration Associates

## EXCESS SPOIL PILE OR REFUSE PILE IDENTIFICATION

Pile Name Excess Spoil Disposal Area #2  
Pile Number N/A  
MSHA ID Number 1211-UT-09-02093-05

Inspection Date March 26, 2010  
Inspected by Rusty Netz  
Reason for Inspection First Quarter Inspection 2010

Attachment to Report? (such as refuse sample analysis or photos) **YES**

## Field Evaluation

1. Foundation preparation, including the removal of all organic material and topsoil.

Existing disturbed site. No additional topsoil removal is required by the approved plan

2. Placement of underdrains and protective filter systems.

No under-drains or filters area required by the approved plan

3. Installation of final surface drainage systems

N/A

4. Placement and compaction of fill materials

No new material was placed in this disposal area during the quarter.

5. Final grading and revegetation of fill.

N/A

6. Appearances of instability, structural weakness, and other hazardous conditions

No aspects of the Fill structure were observed that could affect its stability or functionality

# INSPECTION AND CERTIFIED REPORT ON EXCESS SPOIL PILE OR REFUSE PILE

## Excess Spoil Disposal Area #2

7. Other comments. Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period

Construction of the fill has been proceeding in shallow lifts in general conformance with the approved plan.

Analytical results from samples taken in the prior quarter have been received from the testing lab. They are attached hereto.

### QUALIFICATION STATEMENT:

I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and that inspections are made by myself and include any appearances of instability, structural weakness or other hazardous condition of the structure affecting stability.

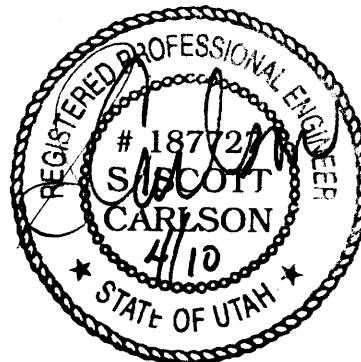
Signature: Rusty nety Date: 4/25/10

### CERTIFICATION STATEMENT

I hereby certify that: I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds the minimum design requirements under all applicable federal, state, and local regulations; and, that inspections and inspection reports are made by myself or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

By: S. Scott Carlson, PE, Twin Peaks, P.C.  
P.E. Number & State: 187727 UTAH

Affix Signature, Stamp and Date





Coarse Refuse Pile

March 26, 2010



Coarse Refuse Pile

March 26, 2010





Excess Spoil Disposal Area #1

March 26, 2010



Excess Spoil Disposal Area #2

March 26, 2010



Coarse Refuse Toe Pond

March 26, 2010



Rail Cut Pond

March 26, 2010





Pasture Pond

March 26, 2010

April 21, 2010

## Report to:

Elona Hayward  
American West Analytical Labs  
463 West 3600 South  
Salt Lake City, UT 84115

## Bill to:

Lynn Turner  
American West Analytical Labs  
463 West 3600 South  
Salt Lake City, UT 84115

cc: Rebekah Winkler

Project ID: 1003373/Spoils-DOGM

ACZ Project ID: L81240

Elona Hayward:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on March 23, 2010. This project has been assigned to ACZ's project number, L81240. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L81240. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after May 21, 2010. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

If you have any questions or other needs, please contact your Project Manager.



Tony Antalek has reviewed and  
approved this report.





American West Analytical Labs

April 21, 2010

Project ID: 1003373/Spoils-DOGM

ACZ Project ID: L81240

**Sample Receipt**

ACZ Laboratories, Inc. (ACZ) received 8 soil samples from American West Analytical Labs on March 23, 2010. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L81240. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

**Holding Times**

All analyses were performed within EPA recommended holding times.

**Sample Analysis**

These samples were analyzed for inorganic parameters. The individual methods are referenced on both the ACZ invoice and the analytical reports. The extended qualifier reports may contain footnotes qualifying specific elements due to QC failures. In addition the following has been noted with this specific project:

1. The Texture analysis could not be performed due to insufficient sample volume.

**American West Analytical Labs**

Project ID: 1003373/Spoils-DOGM

Sample ID: NW

ACZ Sample ID: **L81240-01**

Date Sampled: 08/10/09 00:00

Date Received: 03/23/10

Sample Matrix: Soil

## Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	12			t CaCO3/Kt	1	5	04/21/10 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	75			t CaCO3/Kt	1	5	04/21/10 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	63			t CaCO3/Kt	1	5	04/21/10 0:00	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	16.3	H	*	%	0.1	0.5	04/16/10 20:06	brd
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	7.5		*	%	0.1	0.5	04/12/10 10:54	bsu
Sulfur Forms	M600/2-78-054 3.2.4-MOD								
Sulfur HCl Residue		0.39	H	*	%	0.01	0.1	04/14/10 0:00	bsu
Sulfur HNO3 Residue		0.06	BH	*	%	0.01	0.1	04/14/10 0:00	bsu
Sulfur Organic		0.06	BH	*	%	0.01	0.1	04/14/10 0:00	bsu
Residual Mod									
Sulfur Pyritic Sulfide		0.33	H	*	%	0.01	0.1	04/14/10 0:00	bsu
Sulfur Sulfate			UH	*	%	0.01	0.1	04/14/10 0:00	bsu
Sulfur Total		0.39	H	*	%	0.01	0.1	04/14/10 0:00	bsu
Total Sulfur minus Sulfate		0.39	H	*	%	0.01	0.1	04/14/10 0:00	bsu
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		See case narrative							N/A
Sand		See case narrative							N/A
Silt		See case narrative							N/A
Texture Classification		See case narrative							N/A

## Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							04/02/10 16:45	as/bsu
Crush and Pulverize	USDA No. 1, 1972							04/08/10 9:00	brd/bsu
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2		H					04/08/10 9:00	brd
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2		H					04/08/10 9:00	bsu/brd

**American West Analytical Labs**

Project ID: 1003373/Spoils-DOGM

Sample ID: NE

ACZ Sample ID: **L81240-02**

Date Sampled: 08/10/09 00:00

Date Received: 03/23/10

Sample Matrix: Soil

## Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	15			t CaCO <sub>3</sub> /Kt	1	5	04/21/10 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	59			t CaCO <sub>3</sub> /Kt	1	5	04/21/10 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	44			t CaCO <sub>3</sub> /Kt	1	5	04/21/10 0:00	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	17.7	H	*	%	0.1	0.5	04/17/10 12:20	brd
Neutralization Potential as CaCO <sub>3</sub>	M600/2-78-054 3.2.3	5.9		*	%	0.1	0.5	04/12/10 11:49	bsu
Sulfur Forms	M600/2-78-054 3.2.4-MOD								
Sulfur HCl Residue		0.42	H	*	%	0.01	0.1	04/14/10 0:00	bsu
Sulfur HNO <sub>3</sub> Residue		0.10	H	*	%	0.01	0.1	04/14/10 0:00	bsu
Sulfur Organic		0.10	H	*	%	0.01	0.1	04/14/10 0:00	bsu
Residual Mod									
Sulfur Pyritic Sulfide		0.32	H	*	%	0.01	0.1	04/14/10 0:00	bsu
Sulfur Sulfate		0.05	BH	*	%	0.01	0.1	04/14/10 0:00	bsu
Sulfur Total		0.47	H	*	%	0.01	0.1	04/14/10 0:00	bsu
Total Sulfur minus Sulfate		0.42	H	*	%	0.01	0.1	04/14/10 0:00	bsu
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		See case narrative							N/A
Sand		See case narrative							N/A
Silt		See case narrative							N/A
Texture Classification		See case narrative							N/A

## Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							04/02/10 16:46	as/bsu
Crush and Pulverize	USDA No. 1, 1972							04/08/10 9:31	brd/bsu
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2		H					04/08/10 12:42	brd
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2		H					04/08/10 9:30	bsu/brd

**American West Analytical Labs**

Project ID: 1003373/Spoils-DOGM

Sample ID: SW

ACZ Sample ID: **L81240-03**

Date Sampled: 08/10/09 00:00

Date Received: 03/23/10

Sample Matrix: Soil

## Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	12			t CaCO3/Kt	1	5	04/21/10 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	100			t CaCO3/Kt	1	5	04/21/10 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	88			t CaCO3/Kt	1	5	04/21/10 0:00	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	16.7	H	*	%	0.1	0.5	04/17/10 20:26	brd
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	10.0		*	%	0.1	0.5	04/12/10 12:16	bsu
Sulfur Forms	M600/2-78-054 3.2.4-MOD								
Sulfur HCl Residue		0.38	H	*	%	0.01	0.1	04/14/10 0:00	bsu
Sulfur HNO3 Residue		0.06	BH	*	%	0.01	0.1	04/14/10 0:00	bsu
Sulfur Organic		0.06	BH	*	%	0.01	0.1	04/14/10 0:00	bsu
Residual Mod									
Sulfur Pyritic Sulfide		0.32	H	*	%	0.01	0.1	04/14/10 0:00	bsu
Sulfur Sulfate		0.02	BH	*	%	0.01	0.1	04/14/10 0:00	bsu
Sulfur Total		0.40	H	*	%	0.01	0.1	04/14/10 0:00	bsu
Total Sulfur minus Sulfate		0.38	H	*	%	0.01	0.1	04/14/10 0:00	bsu
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		See case narrative							N/A
Sand		See case narrative							N/A
Silt		See case narrative							N/A
Texture Classification		See case narrative							N/A

## Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							04/02/10 16:47	as/bsu
Crush and Pulverize	USDA No. 1, 1972							04/08/10 10:02	brd/bsu
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2		H					04/08/10 16:25	brd
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2		H					04/08/10 10:00	bsu/brd

**American West Analytical Labs**

Project ID: 1003373/Spoils-DOGM

Sample ID: SE

ACZ Sample ID: **L81240-04**

Date Sampled: 08/10/09 00:00

Date Received: 03/23/10

Sample Matrix: Soil

## Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	14			t CaCO <sub>3</sub> /Kt	1	5	04/21/10 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	120			t CaCO <sub>3</sub> /Kt	1	5	04/21/10 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	106			t CaCO <sub>3</sub> /Kt	1	5	04/21/10 0:00	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	17.4	H	*	%	0.1	0.5	04/18/10 4:33	brd
Neutralization Potential as CaCO <sub>3</sub>	M600/2-78-054 3.2.3	12.0		*	%	0.1	0.5	04/12/10 12:43	bsu
Sulfur Forms	M600/2-78-054 3.2.4-MOD								
Sulfur HCl Residue		0.43	H	*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur HNO <sub>3</sub> Residue		0.03	BH	*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur Organic		0.03	BH	*	%	0.01	0.1	04/15/10 0:00	bsu
Residual Mod									
Sulfur Pyritic Sulfide		0.40	H	*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur Sulfate		0.02	BH	*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur Total		0.45	H	*	%	0.01	0.1	04/15/10 0:00	bsu
Total Sulfur minus Sulfate		0.43	H	*	%	0.01	0.1	04/15/10 0:00	bsu
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		See case narrative							N/A
Sand		See case narrative							N/A
Silt		See case narrative							N/A
Texture Classification		See case narrative							N/A

## Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							04/02/10 16:49	as/bsu
Crush and Pulverize	USDA No. 1, 1972							04/08/10 10:33	brd/bsu
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2		H					04/08/10 20:08	brd
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2		H					04/08/10 10:30	bsu/brd

**American West Analytical Labs**

Project ID: 1003373/Spoils-DOGM

Sample ID: NW

ACZ Sample ID: **L81240-05**

Date Sampled: 12/05/09 00:00

Date Received: 03/23/10

Sample Matrix: Soil

## Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	17			t CaCO3/Kt	1	5	04/21/10 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	66			t CaCO3/Kt	1	5	04/21/10 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	49			t CaCO3/Kt	1	5	04/21/10 0:00	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	23.8		*	%	0.1	0.5	04/18/10 12:40	brd
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	6.6		*	%	0.1	0.5	04/12/10 13:10	bsu
Sulfur Forms	M600/2-78-054 3.2.4-MOD								
Sulfur HCl Residue		0.50		*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur HNO3 Residue		0.11		*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur Organic		0.11		*	%	0.01	0.1	04/15/10 0:00	bsu
Residual Mod									
Sulfur Pyritic Sulfide		0.39		*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur Sulfate		0.05	B	*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur Total		0.55		*	%	0.01	0.1	04/15/10 0:00	bsu
Total Sulfur minus Sulfate		0.50		*	%	0.01	0.1	04/15/10 0:00	bsu
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		See case narrative							N/A
Sand		See case narrative							N/A
Silt		See case narrative							N/A
Texture Classification		See case narrative							N/A

## Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							04/02/10 16:50	as/bsu
Crush and Pulverize	USDA No. 1, 1972							04/08/10 11:04	brd/bsu
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2							04/08/10 23:51	brd
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							04/08/10 11:00	bsu/brd

**American West Analytical Labs**

Project ID: 1003373/Spoils-DOGM

Sample ID: NE

ACZ Sample ID: **L81240-06**

Date Sampled: 12/05/09 00:00

Date Received: 03/23/10

Sample Matrix: Soil

## Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	14			t CaCO3/Kt	1	5	04/21/10 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	58			t CaCO3/Kt	1	5	04/21/10 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	44			t CaCO3/Kt	1	5	04/21/10 0:00	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	22.8		*	%	0.1	0.5	04/18/10 20:46	brd
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	5.8		*	%	0.1	0.5	04/12/10 13:38	bsu
Sulfur Forms	M600/2-78-054 3.2.4-MOD								
Sulfur HCl Residue		0.46		*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur HNO3 Residue		0.15		*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur Organic		0.15		*	%	0.01	0.1	04/15/10 0:00	bsu
Residual Mod									
Sulfur Pyritic Sulfide		0.31		*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur Sulfate			U	*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur Total		0.46		*	%	0.01	0.1	04/15/10 0:00	bsu
Total Sulfur minus Sulfate		0.46		*	%	0.01	0.1	04/15/10 0:00	bsu
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		See case narrative							N/A
Sand		See case narrative							N/A
Silt		See case narrative							N/A
Texture Classification		See case narrative							N/A

## Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							04/02/10 16:51	as/bsu
Crush and Pulverize	USDA No. 1, 1972							04/08/10 11:36	brd/bsu
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2							04/09/10 3:34	brd
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							04/08/10 11:30	bsu/brd

**American West Analytical Labs**

Project ID: 1003373/Spoils-DOGM

Sample ID: SW

ACZ Sample ID: **L81240-07**

Date Sampled: 12/05/09 00:00

Date Received: 03/23/10

Sample Matrix: Soil

## Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	20			† CaCO <sub>3</sub> /Kt	1	5	04/21/10 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	61			† CaCO <sub>3</sub> /Kt	1	5	04/21/10 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	41			† CaCO <sub>3</sub> /Kt	1	5	04/21/10 0:00	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	22.0		*	%	0.1	0.5	04/19/10 4:53	brd
Neutralization Potential as CaCO <sub>3</sub>	M600/2-78-054 3.2.3	6.1		*	%	0.1	0.5	04/12/10 14:05	bsu
Sulfur Forms	M600/2-78-054 3.2.4-MOD								
Sulfur HCl Residue		0.56		*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur HNO <sub>3</sub> Residue		0.08	B	*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur Organic		0.08	B	*	%	0.01	0.1	04/15/10 0:00	bsu
Residual Mod									
Sulfur Pyritic Sulfide		0.48		*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur Sulfate		0.07	B	*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur Total		0.63		*	%	0.01	0.1	04/15/10 0:00	bsu
Total Sulfur minus Sulfate		0.56		*	%	0.01	0.1	04/15/10 0:00	bsu
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		See case narrative							N/A
Sand		See case narrative							N/A
Silt		See case narrative							N/A
Texture Classification		See case narrative							N/A

## Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							04/02/10 16:53	as/bsu
Crush and Pulverize	USDA No. 1, 1972							04/08/10 12:07	brd/bsu
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2							04/09/10 7:17	brd
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							04/08/10 12:00	bsu/brd



**American West Analytical Labs**

Project ID: 1003373/Spoils-DOGM

Sample ID: SE

ACZ Sample ID: **L81240-08**

Date Sampled: 12/05/09 00:00

Date Received: 03/23/10

Sample Matrix: Soil

## Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 1.3	8			t CaCO3/Kt	1	5	04/21/10 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	107			t CaCO3/Kt	1	5	04/21/10 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	99			t CaCO3/Kt	1	5	04/21/10 0:00	calc
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	11.1		*	%	0.1	0.5	04/19/10 13:00	brd
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	10.7		*	%	0.1	0.5	04/12/10 14:32	bsu
Sulfur Forms	M600/2-78-054 3.2.4-MOD								
Sulfur HCl Residue		0.19		*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur HNO3 Residue			U	*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur Organic			U	*	%	0.01	0.1	04/15/10 0:00	bsu
Residual Mod									
Sulfur Pyritic Sulfide		0.19		*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur Sulfate		0.05	B	*	%	0.01	0.1	04/15/10 0:00	bsu
Sulfur Total		0.24		*	%	0.01	0.1	04/15/10 0:00	bsu
Total Sulfur minus Sulfate		0.19		*	%	0.01	0.1	04/15/10 0:00	bsu
Texture by Hydrometer	ASTM D 422 Hydrometer								
Clay		See case narrative							N/A
Sand		See case narrative							N/A
Silt		See case narrative							N/A
Texture Classification		See case narrative							N/A

## Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							04/02/10 16:54	as/bsu
Crush and Pulverize	USDA No. 1, 1972							04/08/10 12:38	brd/bsu
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2							04/09/10 10:59	brd
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2							04/08/10 12:30	bsu/brd


**Report Header Explanations**

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

**QC Sample Types**

AS	Analytical Spike (Post Digestion)	LCSWD	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	LFB	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	LFM	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	LFMD	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	LRB	Laboratory Reagent Blank
ICB	Initial Calibration Blank	MS	Matrix Spike
ICV	Initial Calibration Verification standard	MSD	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	PBS	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	PBW	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	PQV	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	SDL	Serial Dilution

**QC Sample Type Explanations**

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

**ACZ Qualifiers (Qual)**

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

**Method References**

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

**Comments**

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.
- (4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click:

<http://www.acz.com/public/extquallist.pdf>

**American West Analytical Labs**

Project ID: 1003373/Spoils-DOGM

ACZ Project ID: **L81240****Carbon, total organic (TOC)**

ASA No.9 29-2.2.4 Combustion/IR

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG280841</b>													
WG280841PBS	PBS	04/16/10 12:00				U	%		-0.3	0.3			
L81240-01DUP	DUP	04/17/10 4:13			16.3	16.16	%				0.9	20	ZQ

**Neutralization Potential as CaCO3**

M600/2-78-054 3.2.3

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG280549</b>													
WG280549PBS	PBS	04/12/10 10:00				U	%		-0.1	0.1			
WG280549LCSS	LCSS	04/12/10 10:27	PCN33453	100		113.54	%	113.5	80	120			
L81240-01DUP	DUP	04/12/10 11:21			7.5	7.66	%				2.1	20	

**Sulfur Organic Residual Mod**

M600/2-78-054 3.2.4-MOD

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG280609</b>													
L81240-01DUP	DUP	04/14/10 17:12			.06	.05	%				18.2	20	RA

**Sulfur Pyritic Sulfide**

M600/2-78-054 3.2.4-MOD

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG280609</b>													
L81240-01DUP	DUP	04/14/10 17:12			.33	.33	%				0	20	

**Sulfur Sulfate**

M600/2-78-054 3.2.4-MOD

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG280609</b>													
L81240-01DUP	DUP	04/14/10 17:12			U	.02	%				200	20	RA

**Sulfur Total**

M600/2-78-054 3.2.4-MOD

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG280609</b>													
WG280609PBS	PBS	04/14/10 9:00				U	%		-0.03	0.03			
WG280609LCSS	LCSS	04/14/10 11:44	PCN34425	4.24		4.58	%	108	3.84	4.64			
L81240-01DUP	DUP	04/14/10 17:12			.39	.4	%				2.5	20	

**Total Sulfur Minus Sulfate**

M600/2-78-054 3.2.4-MOD

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG280609</b>													
L81240-01DUP	DUP	04/14/10 17:12			.39	.38	%				2.6	20	

American West Analytical Labs

ACZ Project ID: **L81240**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
<b>L81240-01</b>	WG280841	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG280609	Sulfur Organic Residual Mod	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
<b>L81240-02</b>	WG280841	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG280609	Sulfur Organic Residual Mod	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
<b>L81240-03</b>	WG280841	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG280609	Sulfur Organic Residual Mod	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
<b>L81240-04</b>	WG280841	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG280609	Sulfur Organic Residual Mod	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
<b>L81240-05</b>	WG280841	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG280609	Sulfur Organic Residual Mod	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
<b>L81240-06</b>	WG280841	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG280609	Sulfur Organic Residual Mod	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

American West Analytical Labs

ACZ Project ID: **L81240**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
<b>L81240-07</b>	WG280841	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG280609	Sulfur Organic Residual Mod	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
<b>L81240-08</b>	WG280841	Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG280609	Sulfur Organic Residual Mod	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

**American West Analytical Labs**ACZ Project ID: **L81240**

## Soil Analysis

**The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.**

Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR
Neutralization Potential as CaCO <sub>3</sub>	M600/2-78-054 3.2.3
Sulfur HCl Residue	M600/2-78-054 3.2.4-MOD
Sulfur HNO <sub>3</sub> Residue	M600/2-78-054 3.2.4-MOD
Sulfur Organic Residual Mod	M600/2-78-054 3.2.4-MOD
Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4-MOD
Sulfur Sulfate	M600/2-78-054 3.2.4-MOD
Sulfur Total	M600/2-78-054 3.2.4-MOD
Total Sulfur minus Sulfate	M600/2-78-054 3.2.4-MOD

**American West Analytical Labs**  
1003373/Spoils-DOGM

ACZ Project ID: L81240  
Date Received: 03/23/2010 08:25  
Received By: gac  
Date Printed: 3/23/2010

**Receipt Verification**

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

**Exceptions: If you answered no to any of the above questions, please describe**

N/A

**Contact (For any discrepancies, the client must be contacted)**

The client was not contacted.

**Shipping Containers**

Cooler Id	Temp (°C)	Rad (µR/hr)
NA10485	3.3	15

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

**Notes**

**American West Analytical Labs**  
1003373/Spoils-DOGM

ACZ Project ID: L81240  
Date Received: 03/23/2010 08:25  
Received By: gac  
Date Printed: 3/23/2010

**Sample Container Preservation**

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L81240-01	NW									X		
L81240-02	NE									X		
L81240-03	SW									X		
L81240-04	SE									X		
L81240-05	NW									X		
L81240-06	NE									X		
L81240-07	SW									X		
L81240-08	SE									X		

**Sample Container Preservation Legend**

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

\* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: gac



# American West Analytical Laboratories

Client: American West Analytical Laboratories  
Address: 463 W. 3600 S.  
Salt Lake City, UT 84115

Project Name: **Spoils - DOGM**  
PO#: **1003373**

Chain of Custody

Contact: Elona Hayward  
Phone: (801) 263-8686  
Fax: (801) 263-8687

Email: [elona@awal-labs.com](mailto:elona@awal-labs.com)  
[rebekah@awal-labs.com](mailto:rebekah@awal-labs.com)

Lab Sample Set #

Page 1 of 1

QC Level:

Turn Around Time

**Standard**

Sample ID:	Date Sampled	Time	# of Containers	Sample Matrix	ABA, ANP, AGP Calculations	TOC	Particle Size	Total Sulfur	Neutralization Potential	Comments
1 NW	8/10/2009		1	S	X	X	X	X	X	
2 NE	8/10/2009		1	S	X	X	X	X	X	
3 SW	8/10/2009		1	S	X	X	X	X	X	
4 SE	8/10/2009		1	S	X	X	X	X	X	
5 NW	12/5/2009		1	S	X	X	X	X	X	
6 NE	12/5/2009		1	S	X	X	X	X	X	
7 SW	12/5/2009		1	S	X	X	X	X	X	
8 SE	12/5/2009		1	S	X	X	X	X	X	
9										
10										Samples to ACZ Labs.
11										
12										
13										Appropriate Utah state certifications required.
14										
15										

Special Instructions: Include project name and PO# on final report and invoice. Email results to both Elona and Rebekah.

Relinquished by: Signature <i>Denise Bruun</i>	Date: 3/22/10	Received by: Signature <i>HL</i>	Date:
Print Name Denise Bruun	Time: 11:00	Print Name	Time: 3:20
Relinquished by: Signature	Date:	Received by: Signature	Date:
Print Name	Time:	Print Name	Time:



**AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES**

Rusty Netz  
Sunnyside Cogeneration  
PO Box 159  
Sunnyside, UT 84539-  
TEL: (435) 888-4476  
FAX (435) 888-2538  
RE: Spoils - DOGM

463 West 3600 South  
Salt Lake City, Utah  
84115

Lab Set ID:1003373

Dear Rusty Netz:

American West Analytical Laboratories received 8 sample(s) on 3/18/2010 for the analyses presented in the following report.

All analyses were performed in accordance to The NELAC Institute protocols unless noted otherwise. American West Analytical Laboratories is certified by The NELAC Institute in Utah and Texas; and is state certified in Colorado and Idaho. Certification document is available upon request. If you have any questions or concerns regarding this report please feel free to call.

(801) 263-8686  
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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitation limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit.

Thank You,

Approved by:   
Laboratory Director or designee



## INORGANIC ANALYTICAL REPORT

Client: Sunnyside Cogeneration

Contact: Rusty Netz

Project: Spoils - DOGM

Lab Sample ID: 1003373-001

Client Sample ID: NW

Collection Date: 8/10/2009

Received Date: 3/18/2010

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

### TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Boron	mg/kg-dry	3/29/2010 7:20:00 PM	SW6010C	52	< 52	<sup>3</sup> H
Calcium	mg/kg-dry	3/29/2010 6:11:00 PM	SW6010C	1,000	12,000	<sup>3</sup> H
Magnesium	mg/kg-dry	3/29/2010 7:20:00 PM	SW6010C	100	3,700	<sup>3</sup> H
Selenium	mg/kg-dry	3/23/2010 9:34:11 PM	SW6020A	0.89	7.0	H
Sodium	mg/kg-dry	3/29/2010 7:20:00 PM	SW6010C	100	180	<sup>3</sup> H

H - Sample was received outside of the holding time.

<sup>3</sup> - Matrix spike recoveries and/or high RPDs indicate suspected sample non-homogeneity. The method is in control as indicated by the LCS.

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## INORGANIC ANALYTICAL REPORT

Client: Sunnyside Cogeneration

Contact: Rusty Netz

Project: Spoils - DOGM

Lab Sample ID: 1003373-002

Client Sample ID: NE

Collection Date: 8/10/2009

Received Date: 3/18/2010

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

### TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Boron	mg/kg-dry	3/29/2010 8:06:00 PM	SW6010C	51	< 51	H
Calcium	mg/kg-dry	3/29/2010 6:23:00 PM	SW6010C	1,000	20,000	H
Magnesium	mg/kg-dry	3/29/2010 6:23:00 PM	SW6010C	1,000	8,900	H
Selenium	mg/kg-dry	3/23/2010 10:20:42 PM	SW6020A	0.86	5.5	H
Sodium	mg/kg-dry	3/29/2010 8:06:00 PM	SW6010C	100	330	H

*H - Sample was received outside of the holding time.*

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Laboratory Director

Jose Rocha  
QA Officer

Report Date: 3/30/2010 Page 3 of 17

All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAC protocols. Pertinent sampling information is located on the attached COC. This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



## INORGANIC ANALYTICAL REPORT

**AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES**

**Client:** Sunnyside Cogeneration  
**Project:** Spoils - DOGM  
**Lab Sample ID:** 1003373-003  
**Client Sample ID:** SW  
**Collection Date:** 8/10/2009  
**Received Date:** 3/18/2010

**Contact:** Rusty Netz

### **TOTAL METALS**

<b>Analytical Results</b>	<b>Units</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Boron	mg/kg-dry	3/29/2010 8:10:00 PM	SW6010C	51	< 51	H
Calcium	mg/kg-dry	3/29/2010 6:26:00 PM	SW6010C	1,000	9,400	H
Magnesium	mg/kg-dry	3/29/2010 8:10:00 PM	SW6010C	100	4,000	H
Selenium	mg/kg-dry	3/23/2010 10:26:31 PM	SW6020A	0.86	6.6	H
Sodium	mg/kg-dry	3/29/2010 8:10:00 PM	SW6010C	100	390	H

*H - Sample was received outside of the holding time.*

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Report Date: 3/30/2010 Page 4 of 17

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## INORGANIC ANALYTICAL REPORT

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Client: Sunnyside Cogeneration  
Project: Spoils - DOGM  
Lab Sample ID: 1003373-004  
Client Sample ID: SE  
Collection Date: 8/10/2009  
Received Date: 3/18/2010

Contact: Rusty Netz

### TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Boron	mg/kg-dry	3/29/2010 8:14:00 PM	SW6010C	52	< 52	H
Calcium	mg/kg-dry	3/29/2010 6:30:00 PM	SW6010C	1,000	6,100	H
Magnesium	mg/kg-dry	3/29/2010 8:14:00 PM	SW6010C	100	2,300	H
Selenium	mg/kg-dry	3/23/2010 10:32:20 PM	SW6020A	0.88	5.8	H
Sodium	mg/kg-dry	3/29/2010 8:14:00 PM	SW6010C	100	380	H

H - Sample was received outside of the holding time.

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Report Date: 3/30/2010 Page 5 of 17

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## INORGANIC ANALYTICAL REPORT

Client: Sunnyside Cogeneration

Contact: Rusty Netz

Project: Spoils - DOGM

Lab Sample ID: 1003373-005

Client Sample ID: NW

Collection Date: 12/5/2009

Received Date: 3/18/2010

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

### TOTAL METALS

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Boron	mg/kg-dry	3/29/2010 8:18:00 PM	SW6010C	52	< 52	
Calcium	mg/kg-dry	3/29/2010 6:34:00 PM	SW6010C	1,000	5,800	
Magnesium	mg/kg-dry	3/29/2010 8:18:00 PM	SW6010C	100	1,900	
Selenium	mg/kg-dry	3/23/2010 10:38:08 PM	SW6020A	0.89	7.3	
Sodium	mg/kg-dry	3/29/2010 8:18:00 PM	SW6010C	100	360	

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QA Officer



## INORGANIC ANALYTICAL REPORT

**AMERICAN  
WEST  
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LABORATORIES**

**Client:** Sunnyside Cogeneration

**Contact:** Rusty Netz

**Project:** Spoils - DOGM

**Lab Sample ID:** 1003373-006

**Client Sample ID:** NE

**Collection Date:** 12/5/2009

**Received Date:** 3/18/2010

### **TOTAL METALS**

<b>Analytical Results</b>	<b>Units</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Boron	mg/kg-dry	3/29/2010 8:22:00 PM	SW6010C	53	< 53	
Calcium	mg/kg-dry	3/29/2010 6:38:00 PM	SW6010C	1,100	14,000	
Magnesium	mg/kg-dry	3/29/2010 8:22:00 PM	SW6010C	110	5,300	
Selenium	mg/kg-dry	3/23/2010 10:43:57 PM	SW6020A	0.90	8.3	
Sodium	mg/kg-dry	3/29/2010 8:22:00 PM	SW6010C	110	220	

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QA Officer

Report Date: 3/30/2010 Page 7 of 17

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## INORGANIC ANALYTICAL REPORT

**AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES**

**Client:** Sunnyside Cogeneration  
**Project:** Spoils - DOGM  
**Lab Sample ID:** 1003373-007  
**Client Sample ID:** SW  
**Collection Date:** 12/5/2009  
**Received Date:** 3/18/2010

**Contact:** Rusty Netz

### **TOTAL METALS**

<b>Analytical Results</b>	<b>Units</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Boron	mg/kg-dry	3/29/2010 8:26:00 PM	SW6010C	51	< 51	
Calcium	mg/kg-dry	3/29/2010 7:02:00 PM	SW6010C	10,000	45,000	
Magnesium	mg/kg-dry	3/29/2010 6:54:00 PM	SW6010C	1,000	17,000	
Selenium	mg/kg-dry	3/23/2010 10:49:45 PM	SW6020A	0.87	6.0	
Sodium	mg/kg-dry	3/29/2010 8:26:00 PM	SW6010C	100	150	

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Jose Rocha  
QA Officer

Report Date: 3/30/2010 Page 8 of 17

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## INORGANIC ANALYTICAL REPORT

**AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES**

**Client:** Sunnyside Cogeneration  
**Project:** Spoils - DOGM  
**Lab Sample ID:** 1003373-008  
**Client Sample ID:** SE  
**Collection Date:** 12/5/2009  
**Received Date:** 3/18/2010

**Contact:** Rusty Netz

### **TOTAL METALS**

<b>Analytical Results</b>	<b>Units</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Boron	mg/kg-dry	3/29/2010 8:30:00 PM	SW6010C	54	< 54	
Calcium	mg/kg-dry	3/29/2010 6:58:00 PM	SW6010C	1,100	11,000	
Magnesium	mg/kg-dry	3/29/2010 8:30:00 PM	SW6010C	110	4,600	
Selenium	mg/kg-dry	3/23/2010 10:55:34 PM	SW6020A	0.92	7.7	
Sodium	mg/kg-dry	3/29/2010 8:30:00 PM	SW6010C	110	150	

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Report Date: 3/30/2010 Page 9 of 17

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## INORGANIC ANALYTICAL REPORT

Client: Sunnyside Cogeneration

Contact: Rusty Netz

Project: Spoils - DOGM

Lab Sample ID: 1003373-001

Client Sample ID: NW

Collection Date: 8/10/2009

Received Date: 3/18/2010

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Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Conductivity	µmhos/cm	3/19/2010 6:00:00 AM	SW9050A	10	330	&H
Nitrate (as N)	mg/kg-dry	3/22/2010 11:16:05 AM	E353.2	0.011	0.061	&H
pH @ 25° C	pH Units	3/18/2010 7:45:00 PM	SW9045D	1.00	8.19	H
Sodium Adsorption Ratio		3/25/2010	Calc.	0.010	0.57	H
Total Nitrogen (as N)	mg/kg-dry	3/26/2010	Calc.	260	1,900	H

*H - Sample was received outside of the holding time.*

*& - Analysis is performed on a 1:1 DI water extract for soils.*

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## INORGANIC ANALYTICAL REPORT

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Client: Sunnyside Cogeneration  
Project: Spoils - DOGM  
Lab Sample ID: 1003373-002  
Client Sample ID: NE  
Collection Date: 8/10/2009  
Received Date: 3/18/2010

Contact: Rusty Netz

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Salt Lake City, Utah  
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Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Conductivity	µmhos/cm	3/19/2010 6:00:00 AM	SW9050A	10	280	&H
Nitrate (as N)	mg/kg-dry	3/22/2010 11:33:11 AM	E353.2	0.010	0.050	&H
pH @ 25° C	pH Units	3/18/2010 7:45:00 PM	SW9045D	1.00	8.29	H
Sodium Adsorption Ratio		3/25/2010	Calc.	0.010	0.61	H
Total Nitrogen (as N)	mg/kg-dry	3/26/2010	Calc.	260	760	H

*H - Sample was received outside of the holding time.*

*& - Analysis is performed on a 1:1 DI water extract for soils.*

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Report Date: 3/30/2010 Page 11 of 17

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## INORGANIC ANALYTICAL REPORT

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Client: Sunnyside Cogeneration  
Project: Spoils - DOGM  
Lab Sample ID: 1003373-003  
Client Sample ID: SW  
Collection Date: 8/10/2009  
Received Date: 3/18/2010

Contact: Rusty Netz

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Salt Lake City, Utah  
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Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Conductivity	µmhos/cm	3/19/2010 6:00:00 AM	SW9050A	10	450	&H
Nitrate (as N)	mg/kg-dry	3/22/2010 11:09:17 AM	E353.2	0.011	< 0.011	&H
pH @ 25° C	pH Units	3/18/2010 7:45:00 PM	SW9045D	1.00	8.06	H
Sodium Adsorption Ratio		3/25/2010	Calc.	0.010	0.57	H
Total Nitrogen (as N)	mg/kg-dry	3/26/2010	Calc.	260	1,100	H

H - Sample was received outside of the holding time.

& - Analysis is performed on a 1:1 DI water extract for soils.

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## INORGANIC ANALYTICAL REPORT

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Client: Sunnyside Cogeneration  
Project: Spoils - DOGM  
Lab Sample ID: 1003373-004  
Client Sample ID: SE  
Collection Date: 8/10/2009  
Received Date: 3/18/2010

Contact: Rusty Netz

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Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Conductivity	µmhos/cm	3/19/2010 6:00:00 AM	SW9050A	10	240	&H
Nitrate (as N)	mg/kg-dry	3/22/2010 11:34:33 AM	E353.2	0.010	0.062	&H
pH @ 25° C	pH Units	3/18/2010 7:45:00 PM	SW9045D	1.00	8.41	H
Sodium Adsorption Ratio		3/25/2010	Calc.	0.010	0.56	H
Total Nitrogen (as N)	mg/kg-dry	3/26/2010	Calc.	260	1,000	H

*H - Sample was received outside of the holding time.*

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## INORGANIC ANALYTICAL REPORT

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Client: Sunnyside Cogeneration  
Project: Spoils - DOGM  
Lab Sample ID: 1003373-005  
Client Sample ID: NW  
Collection Date: 12/5/2009  
Received Date: 3/18/2010

Contact: Rusty Netz

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Salt Lake City, Utah  
84115

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Conductivity	$\mu\text{mhos/cm}$	3/19/2010 6:00:00 AM	SW9050A	10	320	&H
Nitrate (as N)	mg/kg-dry	3/22/2010 11:35:54 AM	E353.2	0.011	0.067	&H
pH @ 25° C	pH Units	3/18/2010 7:45:00 PM	SW9045D	1.00	8.45	H
Sodium Adsorption Ratio		3/25/2010	Calc.	0.010	0.66	
Total Nitrogen (as N)	mg/kg-dry	3/26/2010	Calc.	270	960	H

*H - Sample was received outside of the holding time.*

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## INORGANIC ANALYTICAL REPORT

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Client: Sunnyside Cogeneration  
Project: Spoils - DOGM  
Lab Sample ID: 1003373-006  
Client Sample ID: NE  
Collection Date: 12/5/2009  
Received Date: 3/18/2010

Contact: Rusty Netz

463 West 3600 South  
Salt Lake City, Utah  
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Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Conductivity	µmhos/cm	3/19/2010 6:00:00 AM	SW9050A	10	330	&H
Nitrate (as N)	mg/kg-dry	3/22/2010 11:37:14 AM	E353.2	0.011	0.077	&H
pH @ 25° C	pH Units	3/18/2010 7:45:00 PM	SW9045D	1.00	8.29	H
Sodium Adsorption Ratio		3/25/2010	Calc.	0.010	0.55	
Total Nitrogen (as N)	mg/kg-dry	3/26/2010	Calc.	270	670	H

*H - Sample was received outside of the holding time.*

*& - Analysis is performed on a 1:1 DI water extract for soils.*

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## INORGANIC ANALYTICAL REPORT

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Client: Sunnyside Cogeneration  
Project: Spoils - DOGM  
Lab Sample ID: 1003373-007  
Client Sample ID: SW  
Collection Date: 12/5/2009  
Received Date: 3/18/2010

Contact: Rusty Netz

463 West 3600 South  
Salt Lake City, Utah  
84115

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Conductivity	µmhos/cm	3/19/2010 6:00:00 AM	SW9050A	10	280	&H
Nitrate (as N)	mg/kg-dry	3/22/2010 11:38:35 AM	E353.2	0.011	0.017	&H
pH @ 25° C	pH Units	3/18/2010 7:45:00 PM	SW9045D	1.00	8.38	H
Sodium Adsorption Ratio		3/25/2010	Calc.	0.010	0.59	
Total Nitrogen (as N)	mg/kg-dry	3/26/2010	Calc.	260	530	H

*H - Sample was received outside of the holding time.*

*& - Analysis is performed on a 1:1 DI water extract for soils.*

(801) 263-8686  
Toll Free (888) 263-8686  
Fax (801) 263-8687  
e-mail: awal@awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## INORGANIC ANALYTICAL REPORT

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Client: Sunnyside Cogeneration  
Project: Spoils - DOGM  
Lab Sample ID: 1003373-008  
Client Sample ID: SE  
Collection Date: 12/5/2009  
Received Date: 3/18/2010

Contact: Rusty Netz

463 West 3600 South  
Salt Lake City, Utah  
84115

Analytical Results	Units	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Conductivity	µmhos/cm	3/19/2010 6:00:00 AM	SW9050A	10	270	&H
Nitrate (as N)	mg/kg-dry	3/22/2010 11:39:56 AM	E353.2	0.011	0.044	&H
pH @ 25° C	pH Units	3/18/2010 7:45:00 PM	SW9045D	1.00	8.45	H
Sodium Adsorption Ratio		3/25/2010	Calc.	0.010	0.70	
Total Nitrogen (as N)	mg/kg-dry	3/26/2010	Calc.	270	710	H

*H - Sample was received outside of the holding time.*

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QA Officer

Report Date: 3/30/2010 Page 17 of 17

# American West Analytical Laboratories

## WORK ORDER Summary

23-Mar-10

Work Order: 1003373

WO Type: Standard

Client ID: SUN100	Contact: Rusty Netz	COMMENTS : Footnote report, most parameters received outside of hold. Samples sent to ACZ Labs for tests we do not run;
Project ID: Spoils - DOGM	PM:	
Project: Spoils - DOGM	QC Level: LEVEL I	
ChkList Completed On:	Completed By:	AB
ChkList Reviewed On:	Reviewed By:	
WO Reviewed On: 3/18/2010	Reviewed By: 9	

Sample ID	Client Sample ID	Date Collected	Date Received	Date Due	Matrix	Test Code	Hld	MS	SEL	Sub	Storage
1003373-001A	NW	8/10/2009	3/18/2010 10:37:30 AM	4/1/2010	Soil	3051A-ICPMS-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
SEL Analytes: B CA MG NA											
SEL Analytes: SE											
				4/1/2010		COND-S-9050A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		NO2/NO3-S-353.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		NO3-S-353.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		PH-9045D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		PMOIST	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		SAR-S	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		SOIL-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		TKN-S-351.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		TKN-S-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		TOTAL-NITROGEN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
1003373-001B				4/1/2010		OUTSIDE LAB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ACZ Labs
1003373-002A	NE			4/1/2010		3051A-ICPMS-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		6010C-S	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
SEL Analytes: B CA MG NA											
				4/1/2010		6020-S	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
SEL Analytes: SE											
				4/1/2010		COND-S-9050A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc

# WORK ORDER SUMMARY

23-Mar-10

Work Order: 1003373  
WO Type: Standard

Client ID: SUN100	Contact: Rusty Netz
Project ID: Spoils - DOGM	PM: LEVEL I
Project: Spoils - DOGM	QC Level: LEVEL I
ChkList Completed On: 3/18/2010	Completed By: Reviewed By: Reviewed By: 9
ChkList Reviewed On: 3/18/2010	
WO Reviewed On: 3/18/2010	

## COMMENTS :

Footnote report, most parameters received outside of hold. Samples sent to ACZ Labs for tests we do not run;

Sample ID	Client Sample ID	Date Collected	Date Received	Date Due	Matrix	Test Code	Hld	MS	SEL	Sub	Storage
1003373-002A	NE	8/10/2009	3/18/2010 10:37:30 AM	4/1/2010	Soil	NO2/NO3-S-353.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		NO3-S-353.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		PH-9045D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		PMOIST	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		SAR-S	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		SOIL-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		TKN-S-351.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		TKN-S-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		TOTAL-NITROGEN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
1003373-002B				4/1/2010		OUTSIDE LAB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ACZ Labs
1003373-003A	SW			4/1/2010		3051A-ICPMS-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		6010C-S	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
	SEL Analytes: B CA MG NA										
				4/1/2010		6020-S	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
	SEL Analytes: SE										
				4/1/2010		COND-S-9050A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		NO2/NO3-S-353.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		NO3-S-353.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		PH-9045D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		PMOIST	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		SAR-S	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		SOIL-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc

# WORK ORDER SUMMARY

23-Mar-10

Work Order: 1003373  
WO Type: Standard

Client ID: SUN100	Contact: Rusty Netz	COMMENTS : Footnote report, most parameters received outside of hold. Samples sent to ACZ Labs for tests we do not run;
Project ID: Spoils - DOGM	PM: LEVEL I	
Project: Spoils - DOGM	QC Level: LEVEL I	
ChkList Completed On: 3/18/2010	Completed By:	
ChkList Reviewed On: 3/18/2010	Reviewed By:	
WO Reviewed On: 3/18/2010	Reviewed By: 9	

Sample ID	Client Sample ID	Date Collected	Date Received	Date Due	Matrix	Test Code	Hid	MS	SEL	Sub	Storage
1003373-003A	SW	8/10/2009	3/18/2010 10:37:30 AM	4/1/2010	Soil	TKN-S-351.2			<input checked="" type="checkbox"/>		df - wc
				4/1/2010		TKN-S-PR			<input type="checkbox"/>		df - wc
				4/1/2010		TOTAL-NITROGEN			<input type="checkbox"/>		df - wc
1003373-003B				4/1/2010		OUTSIDE LAB			<input type="checkbox"/>		ACZ Labs
1003373-004A	SE			4/1/2010		3051A-ICPMS-PR			<input type="checkbox"/>		df - wc
				4/1/2010		6010C-S			<input checked="" type="checkbox"/>		df - wc
	SEL Analytes: B CA MG NA			4/1/2010		6020-S			<input checked="" type="checkbox"/>		df - wc
	SEL Analytes: SE			4/1/2010		COND-S-9050A			<input type="checkbox"/>		df - wc
				4/1/2010		NO2/NO3-S-353.2			<input checked="" type="checkbox"/>		df - wc
				4/1/2010		NO3-S-353.2			<input type="checkbox"/>		df - wc
				4/1/2010		PH-9045D			<input type="checkbox"/>		df - wc
				4/1/2010		PMOIST			<input type="checkbox"/>		df - wc
				4/1/2010		SAR-S			<input type="checkbox"/>		df - wc
				4/1/2010		SOIL-PR			<input type="checkbox"/>		df - wc
				4/1/2010		TKN-S-351.2			<input checked="" type="checkbox"/>		df - wc
				4/1/2010		TKN-S-PR			<input type="checkbox"/>		df - wc
				4/1/2010		TOTAL-NITROGEN			<input type="checkbox"/>		df - wc
1003373-004B				4/1/2010		OUTSIDE LAB			<input type="checkbox"/>		ACZ Labs
1003373-005A	NW	12/5/2009		4/1/2010		3051A-ICPMS-PR			<input type="checkbox"/>		df - wc

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23-Mar-10

Work Order: 1003373  
WO Type: Standard

Client ID: SUN100	Contact: Rusty Netz
Project ID: Spoils - DOGM	PM: LEVEL I
Project: Spoils - DOGM	QC Level: LEVEL I
ChkList Completed On: 3/18/2010	Completed By:
ChkList Reviewed On:	Reviewed By:
WO Reviewed On:	Reviewed By: 9

## COMMENTS:

Footnote report, most parameters received outside of hold.  
Samples sent to ACZ Labs for tests we do not run;

Sample ID	Client Sample ID	Date Collected	Date Received	Date Due	Matrix	Test Code	Hld	MS	SEL	Sub	Storage
1003373-005A	NW	12/5/2009	3/18/2010 10:37:30 AM	4/1/2010	Soil	6010C-S	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
SEL Analytes: B CA MG NA											
SEL Analytes: SE											
				4/1/2010		6020-S	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		COND-S-9050A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		NO2/NO3-S-353.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		NO3-S-353.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		PH-9045D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		PMOIST	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		SAR-S	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		SOIL-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		TKN-S-351.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		TKN-S-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		TOTAL-NITROGEN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
1003373-005B				4/1/2010		OUTSIDE LAB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ACZ Labs
1003373-006A	NE			4/1/2010		3051A-ICPMS-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		6010C-S	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
SEL Analytes: B CA MG NA											
				4/1/2010		6020-S	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
SEL Analytes: SE											
				4/1/2010		COND-S-9050A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		NO2/NO3-S-353.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		NO3-S-353.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc

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23-Mar-10

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WO Type: Standard

Client ID: SUN100	Contact: Rusty Netz	COMMENTS : Footnote report, most parameters received outside of hold. Samples sent to ACZ Labs for tests we do not run;
Project ID: Spoils - DOGM	PM: LEVEL I	
Project: Spoils - DOGM	QC Level: LEVEL I	
ChkList Completed On:	Completed By	
ChkList Reviewed On:	Reviewed By:	
WO Reviewed On: 3/18/2010	Reviewed By: 9	

Sample ID	Client Sample ID	Date Collected	Date Received	Date Due	Matrix	Test Code	Hld	MS	SEL	Sub	Storage
1003373-006A	NE	12/5/2009	3/18/2010 10:37:30 AM	4/1/2010	Soil	PH-9045D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		PMOIST	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		SAR-S	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		SOIL-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		TKN-S-351.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		TKN-S-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		TOTAL-NITROGEN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
1003373-006B				4/1/2010		OUTSIDE LAB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ACZ Labs
1003373-007A	SW			4/1/2010		3051A-ICPMS-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		6010C-S	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
	SEL Analytes: B CA MG NA			4/1/2010		6020-S	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
	SEL Analytes: SE			4/1/2010		COND-S-9050A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		NO2/NO3-S-353.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		NO3-S-353.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		PH-9045D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		PMOIST	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		SAR-S	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		SOIL-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		TKN-S-351.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		TKN-S-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc

# WORK ORDER SUMMARY

23-Mar-10

Work Order: 1003373  
WO Type: Standard

Client ID: SUN100	Contact: Rusty Netz
Project ID: Spoils - DOGM	PM: LEVEL I
ChkList Completed On:	Completed By
ChkList Reviewed On:	Reviewed By:
WO Reviewed On: 3/18/2010	Reviewed By: 9

## COMMENTS :

Footnote report, most parameters received outside of hold.  
Samples sent to ACZ Labs for tests we do not run;

Sample ID	Client Sample ID	Date Collected	Date Received	Date Due	Matrix	Test Code	Hld	MS	SEL	Sub	Storage
1003373-007A	SW	12/5/2009	3/18/2010 10:37:30 AM	4/1/2010	Soil	TOTAL-NITROGEN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
1003373-007B				4/1/2010		OUTSIDE LAB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ACZ Labs
1003373-008A	SE			4/1/2010		3051A-ICPMS-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		6010C-S	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
	SEL Analytes: B CA MG NA										
				4/1/2010		6020-S	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		COND-S-9050A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		NO2/NO3-S-353.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		NO3-S-353.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		PH-9045D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		PMOIST	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		SAR-S	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		SOIL-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		TKN-S-351.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		TKN-S-PR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
				4/1/2010		TOTAL-NITROGEN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	df - wc
1003373-008B				4/1/2010		OUTSIDE LAB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ACZ Labs



Client Sunnyside Cogen  
Address #1 Power Plant RD

Sunnyside Ut 84539  
City State Zip

Phone 435-888-4476 Fax 435-888-2538

Contact Rusty Netz

E-mail \_\_\_\_\_

Project Name Spills-Dogm

Project Number/P.O.# \_\_\_\_\_

Sampler Name \_\_\_\_\_

AMERICAN WEST  
ANALYTICAL  
LABORATORIES  
463 West 3600 South  
Salt Lake City, Utah 84115  
Email: awal@awal-labs.com

CHAIN OF  
CUSTODY

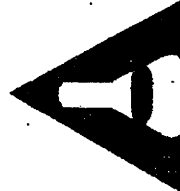
(801) 263-8686  
(888) 263-8686  
(801) 263-8687

Lab Sample Set # 1003373

Page \_\_\_\_\_ of \_\_\_\_\_

Turn Around Time (Circle One)

1 day 2 day 3 day 4 day 5 day Standard



Date/Time Collected		Matrix	Number of Containers (Total)	QC LEVEL				COMMENTS	
				1	2	2+			
8-5-09 - NW		8-5-09							
8-5-09 - NE		8-5-09							
8-5-09 - SW		8-5-09							
8-5-09 - SE		8-5-09							
Remove per Rusty Netz									
NW		12-5-09							
NE		12-5-09							
SW		12-5-09							
SE		12-5-09							

Relinquished By: Signature	Date	Received By: Signature
<u>Rusty Netz</u>	<u>3/16/10</u>	<u>Denise Bruun</u>
PRINT NAME	Time	PRINT NAME
	<u>1:50</u>	
Relinquished By: Signature	Date	Received By: Signature
PRINT NAME	Time	PRINT NAME
Relinquished By: Signature	Date	Received By: Signature
PRINT NAME	Time	PRINT NAME

Special Instructions:	
<u>Sample same as</u>	
<u>Sample set ID</u>	
<u>#0905023</u>	

LABORATORY USE ONLY	
SAMPLES WERE:	
1 Shipped (properly sealed)	Y
2 Ambient or Chilled	Y
3 Temperature	15°
4 Received Broken/Leaking (improperly sealed)	Y
5 Properly Preserved	N
6 Received Within Holding Times	N
Notes: most sampled out of hold	
COC Tape Was:	
1 Present on Outer Package	Y
2 Unbroken on Outer Package	Y
3 Present on Sample	Y
4 Unbroken on Sample	Y
Discrepancies Between Sample Labels and COC Record?	
Y	
Notes: (N)	

0905023

20.6

involved in the extinguishing operations. No burning or unburned coal mine waste will be removed from a permitted disposal area without a removal plan approved by the Division. Consideration will be given to potential hazards to persons working or living in the vicinity of the structure.

#### ACID- and/or TOXIC-FORMING POTENTIAL OF WASTE

Previous tests of the material at the SCA facilities have indicated that the acid- and/or toxic-forming potential of the waste is not a significant problem. However, in order to be conservative, analysis to determine the acid- and/or toxic-forming and alkalinity producing potential of the waste material disposed in the Excess Spoil Disposal Area will be performed for the constituents listed below. The objective of this sampling program is to identify areas within the fill that may adversely impact the surface water, groundwater, plant growth, or the post-mining land use. One grab sample per acre will be taken from each four-foot lift immediately following the completion of the lift and throughout construction of the pile. Results of the sampling shall be submitted to the Division with the Quarterly Engineering Inspection Reports.

Excess spoil that is acid- or toxic-forming or combustible materials placed in the disposal area will be adequately covered with four-feet of non-acid, non-toxic and non-combustible material, or otherwise treated, to control the impact on surface and groundwater, to prevent sustained combustion, and to minimize adverse effects on plant growth and the approved post-mining land use. Excess spoil that is not acid- or toxic-forming or combustible may be used to provide some, or all, of this adequate cover.

Coal mine waste materials, of which geologic properties are uncertain or which have sub-standard geologic characteristics, will be scattered within the interior of the pile at least ten feet from the outer slopes. Waste materials from areas outside of the SCA permit site, but which are comparable to the materials considered in the design of the fill, may be placed in the fill by SCA in accordance with the standards of this section but without additional restriction.

#### ANALYSIS PARAMETERS

- \* pH ✓
- \* Particle Size Analysis (% sand, silt, clay) ✓
- \* Soluble Ca, Mg, and Na ✓
- \* Selenium ✓
- \* Nitrate-N ✓
- \* Maximum Acid Potential Neutralization Potential ✓
- \* Organic Carbon
- \* Electrical Conductivity ✓
- \* Sodium Adsorption Ration ✓
- \* Total N ✓
- \* Boron ✓
- \* Sulfur-total ✓

Test  
For  
these  
Acid Base Account  
and to ACE  
Tim Vanweingarden